

Appl. No.: 09/380,864  
Amendment Dated March 10, 2004  
Reply to Examiner Interview of  
February 17, 2004

JMYT-200US

**Remarks/Arguments:****I. Interview Summary**

The applicant appreciates the opportunity given their counsel, Christopher R. Lewis and Christian M. Bauer, to discuss the subject matter of the claimed invention in a telephone interview with Examiner Leung on February 17, 2004. The applicant makes the substance of the interview of record, in compliance with 37 C.F.R. §§ 1.2 & 1.133(b) and M.P.E.P. § 713.04, as follows.

Regarding the 35 U.S.C. § 112 rejection of claims 17 and 31, the Examiner has indicated the concept behind the limitation of "at least 150%" is supported by the disclosure at page 2, line 30 to page 3, line 2 and the results in Table 3 of Example 1 at page 7. The Examiner indicated, however, it is improper to compare the oxidation catalyst of note (5) with the other comparative examples. The proper analysis is to compare the oxidation catalyst to the lean-NOx catalyst within note (5). This comparison would result in "at least a 300%" volume difference between the NOx catalyst and oxidation catalyst. The Examiner further supported this assertion by bearing in mind the limitations of claim 9 reciting a NOx and an oxidation catalyst. In accordance with the Examiner's assertions, the applicant amends independent claims 9, 21 and 34 by incorporating this feature of Example 1 previously set forth in claims 17 and 31.

The Examiner cautioned, however, that the wording of claim 17, "wherein the volume of a substrate coated with the lean NOx catalyst is at least 150% that of the oxidation catalyst," may create interpretational issues as to the meaning of the term substrate. The applicants therefore have amended claims 9, 21 and 34 to incorporate the limitation of "at least 300%" in such a manner as to clearly identify the volume relationship between the lean NOx and oxidation catalysts. In the same regard, the applicant amends the dependent claims to provide proper antecedent basis in accordance with the amendments to the independent claims.

Regarding the 35 U.S.C. § 103 rejection of claims 19 and 33 under 35 U.S.C. § 103(a) as being unpatentable over Haensel in view of Abe *et al.* (EP 0 661 089), the applicant asserted that Abe *et al.* at page 2, lines 25, 26 teaches that the method of introducing hydrocarbon is

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only effective for an exhaust gas having a relatively low oxygen concentration, which is generated by burning nearly or at theoretical air-fuel ratio. In other words, the applicant asserted that Abe *et al.* teaches introduction of hydrocarbons for engines operating at stoichiometric or rich conditions whereas the present invention involves engines operating under lean conditions. The Examiner pointed out that Abe *et al.* appears to make competing statements in that Abe *et al.* also appears to teach, at page 2, lines 43 and 44, that the invention can be used for exhaust discharged from stationary combustion apparatuses, gasoline engines operated under oxygen excess conditions, and diesel engines. Therefore, the Examiner noted that Abe *et al.* appears to suggest introducing hydrocarbons into exhaust streams of lean-burn engines as well as stoichiometric and rich-burn engines.

## II. Supplemental Amendment

With this supplemental amendment, the applicant cancels claims 17 and 31 and amends claims 9-16, 18, 21-30, 32, 34 and 35, now pending. In view of the amendments and the remarks below, the applicant submits that the pending claims incorporate the Examiner's suggested limitations and are not anticipated nor rendered obvious in light of the prior art cited in the Office Action of September 16, 2003. The applicant respectfully submits the pending claims are now in a condition for allowance and requests early notification to that effect.

As discussed in the Interview summary above, support for the limitation of "at least 300%" is found at page 2, line 30 to page 3, line 2, and at page 7, Example 1, note (5).

The applicant amended claims 19, 21 and 34 to recite a "lean NOx catalyst system" and "oxidation catalyst system" to avoid any confusion regarding the term "substrate," as following the Examiner's suggestion. Support for this amendment is found throughout the specification. In particular, support that the first system is a NOx reduction system can be found at page 2, lines 19-28. Support that the second system is an oxidation system is found at page 3, lines 4-11. Support for the teaching of the volume relationship of the two systems is found once again at page 2, line 30 to page 3, line 2. Additional support for this amendment can be found at page 1, lines 24-29: "passing exhaust from the engine over a first catalyst system comprising platinum group metal and having a relatively high selectivity for NOx reduction, and then

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passing the product gases exiting from said first catalyst system over a second catalyst system having a high activity for the oxidation of hydrocarbons and carbon monoxide." The applicant also amends the dependent claims for clarity and to provide proper antecedent basis to the newly amended independent claims.

No new matter has been added.

### III. Conclusion

The applicant has amended independent claims 9, 21 and 34 as discussed during the Examiner interview to incorporate the volume relationship (at least 300%) between the first NOx reduction catalyst system and the second oxidation catalyst system. The applicant submits that the present amendments to the claims are not rendered obvious by a single, cited prior art reference or the combination of any of the cited references. Accordingly, the applicant submits that the pending claims are now in a condition for allowance and requests early notification to that effect.

Respectfully submitted,

  
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The Commissioner for Patents is hereby  
authorized to charge payment to Deposit  
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I hereby certify that this correspondence is being facsimile  
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March 10, 2004

  
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